

## NOTES ON BIRDS OF THE SUBANSIRI AREA, ASSAM

BY

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*(With a map and one plate)*

The area under consideration is portion of the NE. frontier district of India bounded on the east by the Subansiri River, on the north by the Himalayan Range, and on the south by the North Lakhimpur District of Assam. On the west it adjoins the Balipara Frontier Tract.

### TOPOGRAPHY

The area comprises a complete cross-section of the southern slopes and foothills of the Himalayas, rising abruptly from the Assam plain and extending northward in a succession of steep and steadily heightening east/west ridges, terminating in the snow-clad summits of the main range running up to over 20,000 ft. The principal rivers run in deep gorges between the ridges and flow eastward, either debouching into the Subansiri, as does the Kamla, or, as in the case of the Par and Panior which are nearest the plains, turning sharply southwards at the termination of their course and cutting their own passages through the outermost range.

### THE APA TANI VALLEY

This is quite the most remarkable feature of the district. It lies at a height of 5,000 ft. surrounded by a ring of hills rising to 7,000 ft. and is a flat oval plain of about 20 sq. miles, probably the bed of a dried-up lake, and is the only considerable area of flat land in the whole district.

### Population

The Apa Tani Valley is thickly populated by a settled tribe practising permanent agriculture of an intensive type. The rest of the area is sparsely inhabited by Daflas, a primitive and savage people, who exist by hunting and shifting 'jhum' cultivation.

### Vegetation and Climate

The outer ranges rising steeply from the Assam plains to a height of 4/5,000 ft. receive the full force of the SW. monsoon and experience a very heavy rainfall. They are covered from foot to summit by dense tropical rain forest. This also extends along the bottom of the gorges of the principal rivers far into the hills, gradually changing into a drier type, often deciduous and much mixed with giant bamboo. The interior ranges have a much drier climate, and up to 5,000 ft. have been denuded of their original forest by Dala 'jhuming'. Where the population is low there is a regenerated growth of secondary woodland of a more temperate character, mostly evergreen oak and chestnut, but over wide areas, as in the Pein Valley, the trees have gone for good and the hillsides are covered

in long, coarse thatching grass. The Daflas do not live or cultivate much above 5,000 ft. and the summits of the ridges above this altitude are again covered in heavy evergreen forest though of a less tropical type than that of the outer range.

This description holds good for the country to a depth of 50-60 miles north from the plains, which is as far as exploration has gone. Further in, no doubt, as in the neighbouring Balipara Frontier Tract, one reaches the truly temperate zone characterised by *Pinus excelsa* and deciduous oak at the foot of the main range merging into rhododendron and alpine flora at higher altitudes. In the part of the area under consideration in this paper, however, there is no natural coniferous forest.

The Apa Tani Valley is a complete contrast to the rest of the district. The flat floor is cultivated throughout with terraced paddy fields wherever irrigation is possible, and millet in the drier parts. Round the large villages are carefully fenced and tended vegetable gardens and plantations of *Pinus excelsa* and a species of bamboo which are grown for use in building and as firewood. Neither pine nor bamboo are locally indigenous and were brought with the tribe on their original immigration which must have taken place many hundred years ago as some of the pines are of enormous size. The comparatively small area which remains uncultivated consists of low, bra ken-covered hummocks which in spring are a mauve sea of *Primula senticulata*.

The winter climate is severe as a heavy mist settles each evening and does not disperse until ten o'clock in the morning; and in December and January there are hard night frosts. The Valley lies on a main migration route between the Indian plains and Central Asia and in the spring, particularly, the fallow paddy land is a favourite halting place for a great variety of waders and waterfowl.

The list which follows probably includes less than 30% of the species which actually occur in the area. I spent eighteen months there, but had very little time for serious ornithological work, while the high evergreen forest with its tangled undergrowth of bamboo and cane which covers so much of the country is extremely difficult to work thoroughly. The specimens I obtained are in the British Museum of Natural History, South Kensington. The nomenclature and sequence are mainly those of the Fauna of British India, Stuart Baker, as corrected in Vol. 8 of that work. I have used trinomials only where specimens have been collected and identified.

### List

#### 1. *Corvus macrorhynchos*. Jungle Crow.

Dafila name: *Foa*.

Numerous in the Apa Tani Valley and in the big permanent Dafila villages of Talo and Jorum on its outskirts. Elsewhere scarce. It breeds in May in the pine trees round the Apa Tani villages, and also on the fringes of the forest bordering the cultivated land. No specimens were obtained so that it is unknown whether the Himalayan or Burmese subspecies is the form which occurs.

#### 2. *Urocissa flavirostris*. Yellowbilled Magpie.

Not encountered in the part of the Subansiri area proper which I was able to visit as suitable biotope was absent. On a tour to the Tibetan

frontier in the neighbouring Balipara Frontier Tract, however, I found it common in the deciduous oak—*Pinus excelsa* woods from 8,000-12,000 ft.

3. *Cissa chinensis*. Green Magpie.

Scarce. Seen at Pite, 2,000 ft., in bamboo and mixed forest and once at Kore, 4,500 ft., in evergreen forest. It is a noisy bird but keeps to the canopy of high forest and is hard to observe.

4. *Dendrocitta formosae himalayensis*. Himalayan Tree-pie.

Occurs throughout the area but is most numerous in the tropical rain forests of the outer ranges, particularly at low elevations in bamboo and riverine woodland. Usually one or two are seen in mixed hunting parties, but sometimes one encounters family parties of five or six alone. Two specimens obtained at Pite, 1,500 ft., on the Panjor River on 10-10-46 were in moult.

5. *Dendrocitta frontalis*. Blackbrowed Tree-pie.

I believe I saw this bird on one occasion on Tasser Pattu on the outer range in heavy evergreen jungle at 4,500 ft. The back of the crown and occiput were almost white.

6. *Nucifraga caryocatactes hemispila*. Nutcracker.

This nutcracker was common on the Se La in the Balipara Frontier Tract near the Tibetan border in the alpine woods and meadows near villages from 8,000-12,000 ft.

7. *Parus monticolus monticolus*. Greenbacked Tit.

Fairly common in open woods and secondary jungle from 5,000 ft. upwards. It occurs in cultivated land in the Apa Tani Valley. A specimen was shot at Kore, 5,000 ft. and a pair were seen there on May 20 carrying caterpillars to a hole in a tree-branch at a height of 25 ft.

8. *Machlolophus spilonotus*. Blackspotted Tit.

Seen at all seasons in light forest on the hills round the Apa Tani Valley, 5-6,000 ft., usually in mixed flocks with other insectivorous birds.

9. *Aegithaliscus concinnus iredalei*.<sup>1</sup> Redheaded Tit.

Frequents lightly-wooded country at Kore, 5,000 ft., and the Apa Tani Valley in cultivation, pine and bamboo groves and the scrubby firewood reserves. Usually in family parties of 7 or 8, often with other species.

10. *Melanochlora sultanea*. Indian Sultan Tit.

Widely distributed and fairly common in evergreen forest from the lowest elevations up to 4 000 ft. Usually seen in small parties of 3 or 4 in company with other insectivorous species. Keeps to the tree tops.

11. *Suthora poliotis dafilaensis*. Daffa Suthora.

Not uncommon in flocks in secondary scrub in the Apa Tani firewood reserves at about 6,000 ft. A specimen was obtained.

<sup>1</sup> or *rubricapillus*?—EDS.

12. **Sitta castaneiventris.** Cinnamonbellied Nuthatch.

Not uncommon at medium elevations, 2-5,000 ft. in light or secondary forest.

13. **Sitta formosa.** Beautiful Nuthatch.

Rare. Only seen twice, on both occasions in the canopy of high-elevation forest. A specimen was obtained at 7,000 ft. between Kore and the Apa Tani Valley.

14. **Dryonastes ruficollis.** Rufousnecked Laughing Thrush.

Occurs in the plains at the foot of the outer range, but also commonly in the Pein Valley, 4,000 ft., haunting the 'sholas' and scrub in the hollows of the thatch-grass clad downs. Also seen on the borders of the Apa Tani Valley in the scrubby firewood reserves at Hapulia, 5,000 ft. A noisy species with sweet whistling calls.

15. **Garrulax leucolophus.** Whitecrested Laughing Thrush.

Common in the river valleys in bamboo and mixed forest but not seen above 3,000 ft. A specimen was shot out of a large flock on the Pein River at 1,500 ft.

16. **Garrulax moniliger.** Indian Necklaced Laughing Thrush.

Distribution similar to the last. Occurs in very large parties of thirty or forty birds and is extremely noisy.

17. **Ianthocincla rufogularis.** Rufouschinred Laughing Thrush.

A flock was seen in secondary scrub jungle at Kore, 5,000 ft., in April. They were making a great noise and were apparently pairing off.

18. **Trochalopteryx erythrocephala.** The Redheaded Laughing Thrush.

Occurs in flocks in 'sholas' and scrub in the valleys of the Pein River downs. Two specimens were obtained on the Kae River at 4,500 ft.

19. **Trochalopteryx phoeniceus phoeniceus.** Assam Crimsonwinged Laughing Thrush.

Uncommon. A specimen was shot out of a flock feeding with a large mixed hunting party in dense bracken and scrub on Kore hill at 5,000 ft. Also seen in the undergrowth of high evergreen forest between Kore and the Apa Tani Valley at 6,000 ft.

20. **Grammatoptila striata.** Striated Laughing Thrush.

A specimen was shot out of the tree-tops in high evergreen forest above the Apa Tani Valley at 6,000 ft. It was the only one ever seen in the district.

21. **Pomatorhinus ferruginosus ferruginosus.** Coralbilled Scimitar Babbler.

Dafla name: *Te churi*.

Uncommon. Specimens were brought in by Daflas caught locally at Kore, 5,000 ft.

22. **Xiphiramphus superciliaris.** Slenderbilled Scimitar Babbler.

A solitary specimen was seen in thick evergreen forest on Tasser Puttu at 4,000 ft. on the plains slope. A mixed insectivorous hunting flock was feeding in the trees above, but this bird went bounding away over the ground in long ratlike hops, making such a raucous screaming that I suspected a nest but could not find one. It was a big, chestnut brown scimitar babbler with an astonishingly long, slender, curved bill, quite unmistakable.

23. **Stachyris chrysaea.** Goldenheaded Babbler.

A common bird in the scrub of the firewood reserves round the Apa Tani Valley at 5-6,000 ft. Usually seen in mixed flocks with *Alcippe nipalensis* and other small birds. It is an active and restless species, slipping through the bamboos and undergrowth, seldom ascending high trees, and rarely, if ever, dropping to the ground. I saw a pair carrying bamboo leaves in May but failed to find the nest. This was in the Apa Tani woods at 6,000 ft.

24. **Alcippe nipalensis.** Nepal Babbler.

Common in the Pein Valley in scrub and light jungle. A specimen was shot at Kore, 5,000 ft.

25. **Pseudominla castaneiceps castaneiceps.** Chestnutheaded Babbler.

A specimen was obtained. Exact locality not recorded.

26. **Heterophasia picaoides.** Longtailed Sibia.

I saw one at Lichi in the valley of the Panior River at 3,000 ft. in tall scrub in a clearing in evergreen forest.

27. **Leioptila gracilis.** Grey Sibia.

On Donko Puttu, a hill above the Apa Tani Valley I saw a sibia with a black head, grey upper parts and whitish underparts which looked like this bird and not *L. annectens*. This was in evergreen forest at 7,000 ft. but only just beyond the pine belt. I also believe I have heard its distinctive, melancholy call round the Apa Tani Valley. I was unfortunately unable to shoot a specimen, and as this species is not recorded north of the Brahmaputra, the identification must remain subject to confirmation.

28. **Leioptila annectens annectens.** Blyth's Sibia.

I shot a specimen in an alder coppice at Kore, 5,000 ft.

29. **Leioptila pulchella pulchella.** Beautiful Sibia.

Not uncommon in high, evergreen forest on the crests of the higher hills at 6-7,000 ft. They go about in pairs or small parties, feeding mostly on the moss-grown trunks of the trees and not in the canopy. They hop actively along the big boughs, stopping abruptly at intervals, and at first sight with their jerky movements may quite easily be mistaken for one of the small tree squirrels also found there. I shot two specimens on Pad Puttu, 7,000 ft., and on the divide between Kore and the Apa Tani Valley.

30. *Sibia nipalensis daflaensis*. Austen's Barwing.

Found in the high evergreen forest on the summits of the highest ranges above 7,000 ft. Here it is common, going about in parties of 5 or 6, and is very noisy with most peculiar call notes. They feed largely in the tree-tops and upper mossy branches, but are extremely tame and curious, and when I was camping on Pad Puttu in a snowstorm, several came down to within a few feet of me to have a look. Two specimens were shot on Pad Puttu and Donko Puttu.

31. *Siva cyanouroptera cyanouroptera*. Hodgson's Bluewinged Siva.

A common bird in the bramble and secondary growth round Kore. It is also one of the few species fairly common in the cultivation and pine and bamboo plantations of the Apa Tani Valley. It is usually seen in considerable flocks in company with *Leiothrix* and *Mesia*.

32. *Yuhina gularis*. Stripethroated Yuhina.

I saw a flock of largish, brown-crested yuhinas on Donko Puttu above the Apa Tani Valley in the tree-tops at 7,000 ft. which I doubtfully identified as this species. I have also seen the same birds among rhododendron growth on the divide between Kore and the Apa Tani Valley.

33. *Yuhina nigrimentum nigrimentum*. Blackchinned Yuhina.

Not uncommon in flocks in the high evergreen woods of the Apa Tani hunting ground, 6,000 ft.

34. *Ixulus occipitalis*. Chestnutheaded Ixulus.

35. *Ixulus flavicollis flavicollis*. Yellownaped Ixulus.

Both the above were common all round the Apa Tani Valley in the forests on the hills, also in the open bramble and alder growth round Kore. They occurred in considerable flocks, feeding both in the tree-tops and in the undergrowth. A specimen I obtained of *I. flavicollis* was identified as the typical subspecies and not *baileyi*.

36. *Leiothrix lutea*. Redbilled Leiothrix.

Common round every Dafla village in recently abandoned 'jhum' land. Very common round Kore and in the scrubby Apa Tani firewood reserves, but not seen in the cultivated area in the Apa Tani Valley. The male has a sweet little song of half a dozen notes. It is very like *Mesia argentauris* in habits and frequently consorts with that species. I found a nest (c/2) on May 20 at Hapulua, 5,000 ft., beside a path in dense scrub.

37. *Cutia nipalensis*. Nepal Cutia.

Only once encountered when a pair were seen in the canopy of high forest on Tasser Puttu, 4,500 ft., the crest of the outer range.

38. *Pteruthius erythropterus*. Redwinged Shrike Babbler.

Only twice seen. I shot a solitary specimen at Kore, 5,000 ft. It was feeding on a leafless tree and was slow and sluggish in its movements. A small flock was encountered on another occasion in scrub at the edge of the Apa Tani firewood reserves.

39. **Chloropsis hardwickii hardwickii.** Orangebellied Chloropsis.

Occurs all over the hills in forest both in the mixed bamboo and deciduous riverine jungle at 2,000 ft. and the high evergreen forest at 7,000 ft. or more.

40. **Mesia argenteauris argenteauris.** Silvereared Mesia.

Very common in large flocks in scrub and light jungle throughout the Pein Valley and in the Apa Tani firewood reserves and bamboo plantations. They pair off in April and retire to scrubby nullahs where they become shy and hard to see, but can be detected by their long-drawn call note. A specimen was shot at Kore, 5,000 ft.

41. **Minla ignotincta.** Redtailed Minla.

Dafra name : *Pobhum dasin*.

Quite common in the winter all over the hills from 3,000 ft. upwards but most numerous at about 4-5,000 ft. They are sometimes found in separate flocks in scrub and light tree jungle but are generally in mixed parties, and work the tree-trunks like a tree-creeper or piculet.

42. **Criniger gularis.** Indian Whitethroated Bulbul.

Occurs in evergreen jungle in the lower foothills up to 4,500 ft.

43. **Microscelis psaroides.** Black Bulbul.

One of the commonest bulbuls all over the higher hills, descending to lower levels in winter. Usually seen in noisy flocks in the tree-tops. Specimen not obtained, and it is not known whether the form occurring is *psaroides* or *nigrescens*.

44. **Ixos flavala.** Himalayan Browneared Bulbul.

Common in mixed flocks in the secondary woodland and sholas of the Pein Valley. Specimens shot on Oct. 10, were in moult.

45. **Ixos macclellandi macclellandi.** Rufousbellied Bulbul.

This large bulbul is not uncommon in secondary 'jhum' scrub with a fair proportion of larger trees, such as is found around Kore. Usually seen in twos or threes in mixed flocks. The white throat of loose, lanceolate feathers is very noticeable in the field.

46. **Alcurus striatus.** Striated Green Bulbul.

Not common, but was seen in various places at fairly high elevations, usually in high tree-tops on the edge of evergreen forest. They are usually in pairs and are very noisy.

47. **Molpastes cafer.** Bengal Redvented Bulbul.

Dafra name : *Nikli betom*.

Very common in open country such as the Pein River downs up to 5,000 ft. A specimen was shot at Yatchuli, 4,000 ft., and a nest with 2 incubated eggs was found at the same place in an isolated bush in grassland on 25th May.

48. **Otocompsa jocosa emeria.** Bengal Redwhiskered Bulbul.

Dafla name: *Dukshoh*.

Very common everywhere in the open country of the Pein downs, gathering at times into considerable flocks.

49. **Certhia discolor discolor.** Sikkim Tree-creeper.

A specimen was obtained, but the locality not recorded.

50. **Tesia castaneocoronata.** Chestnutheaded Wren.

A wren which I believe to be this species is not uncommon in the scrubby firewood reserves on the hillsides bordering the Apa Tani Valley at 5-6,000 ft.

51. **Cinclus pallasi.** Indian Brown Dipper.

Common on all the larger rivers and streams from 2,000 ft. upwards; at the lower elevations only in winter.

52. **Saxicola torquata.** Indian Bushchat.

Common in winter in the open country of the Pein River downs and the Apa Tani Valley. I saw a pair in April on the downs at Jorum. The male was in full plumage and I suspect they were breeding.

53. **Rhodophila ferrea ferrea.** Western Dark-grey Bushchat.

Occurs all over the hills in 'jhum' cultivation round Dafla villages and is one of the few species permanently resident and breeding in the highly cultivated Apa Tani Valley. A nest with four eggs was found at Duta on April 20. It was a cup lined with hair in a hole in one of the thick brushwood fences which surrounded the bamboo groves which the Apa Tanis cultivate. The eggs were immaculate Hedgesparrow blue.

54. **Enicurus maculatus.** Spotted Forktail.

Occurs on the smaller rapid streams in heavy forest at all elevations and to a lesser extent on the larger rivers. It is not numerous.

55. **Enicurus schistaceus.** Slatybacked Forktail.

Distribution as the last species but commoner—the commonest forktail of the area. I found a nest being built on May 28 on the Petti Pobhu stream in the Panior Valley at 2,000 ft. It was on a large boulder two feet above water level in the stream bed. It was a solid cup of moss, soaking wet, and was being lined with blackish roots.

56. **Enicurus leschenaulti.** Leschenault's Forktail.

Found along the larger rivers and their tributaries in heavy forest up to 2,000 ft. but not common.

57. **Microcichla scouleri.** Little Forktail.

Seen once on the Kale River at 3,500 ft.

58. **Phoenicurus frontalis.** Bluefronted Redstart.

Seen at Kore, 5,000 ft. in December. A winter visitor presumably.



59. *Phoenicurus hodgsoni*. Hodgson's Redstart.

A pair once seen at Kore. Winter visitor.

60. *Chaimarrhornis leucocephala*. Whitecapped Redstart.

A common winter visitor on all the larger rivers at all heights.

61. *Rhyacornis fuliginosa*. Plumbeous Redstart.

To be seen on all the rivers and streams in the area in winter. I strongly suspect it of breeding in the district at higher elevations. A pair on the Pein River below Kore at 4,500 ft. appeared from their actions to have a nest, though I failed to find it.

62. *Copsychus saularis*. Magpie-Robin.

Rare in the hills. The only ones seen were a pair which were feeding young on April 30 in a hole 30 feet up in a tree in the open grassland of the lower Pein Valley.

63. *Turdus merula albocinctus*. Whitecollared Blackbird.

A small party were seen in January on Pa:l Puttu, 6,000 ft. in thick forest.

64. *Turdus boulboul*. Greywinged Blackbird.

One was seen at 4,500 ft. in 'jhums' on the edge of forest.

65. *Turdus ruficollis*. Redthroated Thrush.66. *Turdus atrogularis*. Blackthroated Thrush.67. *Turdus unicolor*. Tickell's Thrush.68. *Turdus obscurus*. Dark Thrush.

All these thrushes are common winter visitors in open country and secondary scrub all over the hills. They wander about in large flocks and the species mix freely.

69. *Geokichla citrina*. Orangeheaded Ground Thrush.

Not very common but resident in heavy evergreen jungle at moderate elevations. I found a nest almost certainly of this species on May 27. It was a sturdy cup, largely made of moss and lined with rootlets, 10 feet up in a low tree overhanging the path in thick forest at 3,500 ft. on the north slopes of Tasser Puttu.

70. *Oreocincla dauma*. Smallbilled Mountain Thrush.

Once seen in November in a wooded ravine below Kore, 4,500 ft.

71. *Oreocincla mollissima*. Plainbacked Mountain Thrush.

I shot one of a pair in December at 5,000 ft. above Kore in the Apa Tani woods.

72. *Myiophoneus caeruleus*. Himalayan Whistling Thrush.

Not very common. One or two were seen on hill-streams on the slopes of Tasser Puttu, 4,500 ft.

73. **Siphia strophciata strophciata.** Orangeorgeted Flycatcher.  
A fairly common winter visitor. A specimen was obtained at Kore.
74. **Muscicapula melanoleuca.** Little Pied Flycatcher.  
Arrives in the hills above 4,500 ft. in considerable numbers in March, presumably to breed. They haunt fairly open country and cultivation. I have seen them at Kore, the Pein Valley 'sholas' and the Apa Tani Valley.
75. **Eumyias thalassina.** Verditer Flycatcher.  
Occurs in fair numbers all over the hills at all times of the year. I have seen it up to 7,000 ft. It is usually found in cultivation or secondary jungle. A tall dead tree in cleared 'jhum' land makes a very favourite look-out. It has a sweet little song.
76. **Anthipes monileger monileger.** Hodgson's Whiteorgeted Flycatcher.  
A specimen was obtained and others seen in scrubby ravines in broken country below Kore, 4,500 ft.
77. **Culicicapa ceylonensis.** Greyheaded Flycatcher.  
A regular member of the mixed hunting flocks in evergreen forest all over the hills. It is a permanent resident and the commonest flycatcher of the district.
78. **Niltava grandis grandis.** Large Niltava.  
Seen on several occasions in undergrowth and low trees under high forest on the borders of the Apa Tani Valley at 6,000 ft.
79. **Niltava macgroriae.** Small Niltava.  
Uncommon. Similar in habitat and distribution to *N. grandis*.
80. **Tchitrea paradisi.** Indian Paradise Flycatcher.  
Only seen in the 'terai' forest belt at the foot of the hills adjoining the plains at 2-3,000 ft. The subspecies occurring was not ascertained.
81. **Rhipidura albicollis.** Whitethroated Fantail Flycatcher.  
Occurs all over the hills. Usually seen as single birds accompanying mixed insectivorous flocks in forest.
82. **Lanius nigriceps.** Indian Blackheaded Shrike.  
Common in open country such as the Pein Valley downs, and is one of the few species breeding in numbers in the highly cultivated Apa Tani Valley. It nests throughout May in the small patches of scrub in the hollows of the bare, bracken-clad grazing grounds. The nest is in any conspicuous thorny bush. Almost every patch of scrub has a pair. The clutch is 4-6.
83. **Hemipus picatus capitalis.** Brownbacked Pied Shrike.  
Quite common all over the hills up to 7,000 ft., usually in pairs or small family parties.

84. **Pericrocotus brevirostris affinis.** Assam Shortbilled Minivet.

A specimen was obtained but locality not recorded.

85. **Lalage melaschista.** Dark-grey Cuckoo-shrike.

Occurs fairly commonly in riverine bamboo jungle and the oak and chestnut woods of old abandoned 'jhum' land, but not seen in the virgin evergreen forest of the high hills.

86. **Graucalus macei.** Large Himalayan Cuckoo-shrike.

Occurs sparsely all over the hills in secondary open jungle and abandoned 'jhums'.

87. **Dicrurus macrocercus.** Black Drongo.

88. **Dicrurus leucophaeus.** Grey Drongo.

Both these drongos occur commonly at low elevations in the river valleys.

89. **Chaptia aenea aenea.** Northern Bronzed Drongo.

Fairly common around Dafia villages and new 'jhum' clearings. Birds seen at Selsemchi, 1,500 ft., on the outer range in October were in moult with the tail feathers growing. It occurs in the Apa Tani Valley and may well breed there in the pines as I have seen a pair in May chasing a crow out of a grove.

90. **Chibia hottentotta.** Haircrested Drongo.

Fairly common at low and medium elevations in the forest bordering on 'jhum' clearings. A specimen was shot at Lichi, 3,000 ft., on May 27. I saw two pairs building in this neighbourhood at Petti Pobhu in evergreen jungle. One nest was in the outer branches of a high tree, but the other was not more than 15 ft. up in a tree overhanging a stream. Both were hammocks of bark and rootlets like that of *Dissemurus*, and lacked the cobweb plastering used by the smaller drongos.

91. **Bhringa remifer.** The Indian Lesser Racket-tailed Drongo.

Seen on several occasions up to 4,000 ft. in heavy forest on the outer ranges.

92. **Dissemurus paradiseus.** Large Racket-tailed Drongo.

Not common but occurs, usually in pairs, in mixed flocks with tree-pies and other birds up to 7,000 ft. in dense forest.

93. **Franklinia gracilis.** Franklin's Wren-Warbler.

Common round Kore, 5,000 ft. on the bracken-clad hillsides in small parties.

94. **Seicercus affinis.** Allied Flycatcher-Warbler.

A specimen was obtained but the locality not recorded.

95. **Seicercus poliogenys.** Greycheeked Flycatcher-Warbler.

Very common all round the Apa Tani Valley in the scrubby firewood reserves at about 6,000 ft. A constant member of the mixed hunting parties.

96. **Abornis schisticeps.** Black faced Flycatcher-Warbler.

I saw a pair on one occasion in the Apa Tani firewood reserves in a mixed hunting party.

97. **Abornis albogularis albogularis.** Whitethroated Flycatcher-Warbler.

A low elevation species. I shot a specimen, one of a pair, in bamboo and deciduous forest on the river bank at Pein, 3,000 ft.

98. **Horornis pallidipes.** Blanford's Bush-Warbler.

I found a nest which must have belonged to this species (or *H. fortipes*?) at Likha, 4,000 ft. by a path running through abandoned 'jhum's, overgrown with thatch-grass and brambles. It was three feet from the ground a very deep and bulky cup of dead leaves, lined with feathers, some of them green, and contained 4 eggs of a uniform deep purplish chocolate.

99. **Prinia flaviventris.** Yellowbellied Wren-Warbler.

Occurs in grassland in the Pein Valley round Yatchuli at 3,500 ft.

100. **Irena puella.** Fairy Bluebird.

Occurs somewhat uncommonly in the river valley forests up to 3,000 ft.

101. **Oriolus traillii.** Maroon Oriole.

Not uncommon in the forest on the hills round the Apa Tani Valley at 6,000 ft. Unlike the golden orioles it is a very silent bird.

102. **Saroglossa spiloptera assamensis.** Assam Spottedwinged Stare.

Only once encountered when three specimens were shot from a large flock on the outskirts of a 'shola' on the Pein River downs at 3,500 ft. on October 10. One of them, a female, was in moult.

103. **Munia atricapilla.** Northern Chestnutbellied Munia.

An inhabitant of swamps at low elevations at the foot of the hills.

104. **Uroloncha striata.** Hodgson's Munia.

Common all over the hills in secondary 'jhum' cultivation in small flocks.

105. **Passer rutilans cinnamomeus.** Cinnamon Tree-sparrow.

Dafla name: *Pichi*.

Occurs round the Apa Tani villages and cultivation in fair numbers. I found them breeding at Duta, 5,000 ft., in May in holes in wild pear trees, several nests in one tree. The nests are pads of pine needles. The usual clutch was 4 and the eggs were very variable.

106. **Emberiza pusilla.** Little Bunting.

A fairly common winter migrant in open country, particularly in the Apa Tani Valley.

107. **Melophus lathamii.** Crested Bunting.

In winter occurs in flocks all over the hills in open thatch grass country. It is apparently a breeding visitor to the Apa Tani Valley where

it is one of the few birds inhabiting the bare, bracken-covered grazing grounds. From late April on they are numerous there in pairs, but up to the end of May I failed to find a nest and even then some of the males were in winter plumage.

108. *Anthus hodgsoni hodgsoni*. Indian Tree Pipit.

A specimen was obtained, but the locality not recorded.

109. *Aethopyga saturata saturata*. Blackbreasted Sunbird.

Widely but sparingly distributed at all elevations both in open 'jhum' land and the dense forests round the Apa Tani Valley up to 6,000 ft.

110. *Pitta nipalensis*. Bluenaped Pitta.

Once seen. A female was shot on the ground at 6,000 ft. in dense forest on the border of the Apa Tani Valley.

111. *Pitta cucullata*. Greenbreasted Pitta.

I saw a pair in the Kimin Nullah at 500 ft. in the foothill 'terai' forest on 25-5-47. They were flying about together in a purposeful manner as though nest-building or feeding young.

112. *Serilophus rubropygius*. Hodgson's Broadbill.

Once seen. A specimen was shot in bamboo jungle on the banks of the Panior River at Pite, 1,500 ft.

113. *Psarismomus dalhousiae*. Longtailed Broadbill.

Occurs in flocks in riverine jungle along the Panior River and its tributaries up to 3,000 ft.

114. *Dryobates darjellensis*. Darjeeling Pied Woodpecker.

A specimen was obtained, but the locality not recorded.

115. *Dryobates nanus*. Pigmy Woodpecker.

Seen in woodland patches on the Pein River downs, usually in mixed flocks with other insectivorous birds.

116. *Blythipicus pyrrhotis*. Redeared Woodpecker.

Heard and seen on a number of occasions in riverine evergreen and bamboo forest.

117. *Mulleripicus pulverulentus*. Indian Great Slaty Woodpecker.

A bird of low elevations, only seen in the tall evergreen forest of the 'terai' at the foot of the hills near the Kinin River.

118. *Vivia innominatus innominatus*. Speckled Piculet.

119. *Sasia ochracea ochracea*. Rufous Piculet.

Both these piculets were seen together in company with minlas, sivas and mesias in mixed hunting parties in patches of woodland on the Pein River downs.

120. *Megalaima virens magnifica*. Great Himalayan Barbet.  
Common all over the hills at all elevations.

121. *Megalaima asiatica asiatica*. Bluethroated Barbet.  
Common all over the hills at all elevations.

122. *Megalaima franklinii*. Goldthroated Barbet.  
Not uncommon in the tall evergreen forest of the Apa Tani hunting ground at 5-6,000 ft.

123. *Cuculus canorus*. Asiatic Cuckoo.  
A form of the cuckoo, probably subspecies *telephonus*, occurs not very commonly on the higher hills above 4,000 ft. during the breeding season.

124. *Cuculus optatus*. Himalayan Cuckoo.  
Very common in the high woods of the Apa Tani hunting grounds above 5,000 ft.

125. *Cuculus poliocephalus*. Small Cuckoo.  
A common summer visitor to the hills. One was shot at Kore, 5,000 ft., in April.

126. *Cuculus micropterus*. Indian Cuckoo.  
Very common indeed all over the hills.

127. *Surniculus lugubris*. Drongo Cuckoo.  
Seen once in 'jhum' cultivation at Likha, 4,000 ft.

128. *Clamator coromandus*. Redwinged Crested Cuckoo.  
Seen once or twice in April and May in secondary jungle at fairly low elevations.

129. *Centropus bengalensis*. Lesser Coucal.  
Common in the thatch-grass covered downs of the Pein Valley at 3-4,000 ft. One which I disturbed on a very dewy morning was so soaked that it could scarcely fly.

130. *Eurystomus orientalis*. Broadbilled Roller.  
Not uncommon at low elevations in 'jhum' clearings along the Panior Valley. Its favourite hunting stances are the tall dead trees left after the forest has been burned for clearing.

131. *Ceryle lugubris*. Himalayan Pied Kingfisher.  
Found all along the Panior and other large rivers of the district, though thinly distributed as each pair seems to occupy a long stretch of water.

132. *Alcedo atthis*. Common Indian Kingfisher.  
The only kingfisher seen in the Apa Tani Valley where it occurs on the Kale River at 5,000 ft.

133. *Alcedo hercules*. Blyth's Kingfisher.

Seen once on May 27 on the Petti Pobhu, a small stream running through dense evergreen forest at 2,000 ft. A bird passed me three times in an hour carrying a fish in its beak and evidently feeding young. I was unable to find the nest, however.

134. *Dichoceros bicornis*. Great Hornbill.

Only seen at comparatively low elevations up to 2,000 ft. in the evergreen forest along the Panior River.

135. *Rhyticeros undulatus*. Malayan Wreathed Hornbill.

Common in small parties in evergreen forest throughout the hills from plains level up to 6,000 ft. The call is a loud croak but it is not nearly so vociferous as most hornbills. They are very shy and wary, being, like the other large members of the family, much hunted by the local tribesmen not only for food but for the sake of their casques and tail-feathers which are worn as head-dress ornaments.

136. *Aceros nipalensis*. Rufousnecked Hornbill.

Not common. A pair were seen on Tasser Puttu, 4,000 ft., in heavy forest.

137. *Harpactes erythrocephalus*. Redheaded Trogon.

Not common. One was seen in a mixed hunting party in riverine bamboo jungle at Pite, 2,000 ft., and a specimen was shot at Talo, 5,000 ft., in evergreen forest.

138. *Harpactes wardii*. Ward's Trogon.

Only once encountered. A party of a male and two females was seen in evergreen forest above Kore, 5,500 ft. and one of the females was collected.

139. *Cypsiurus batasiensis*. Palm Swift.

Seen round the Daffa village of Selsemchi, 1,800 ft. They probably breed in the thatched eaves of the houses as they do in Naga villages in the hills where the normal nesting sites are not available owing to the absence of palm trees.

140. *Hirundapus giganteus*. Brownrumped Spinetail.

I watched a large flock of fifty or more flying up and down a stretch of the Panior River, 2,000 ft., one evening. A dozen or so at a time would swoop down and dip in the river simultaneously raising a series of longitudinal splashes like a shoal of flying fishes taking wing.

In April I have seen isolated pairs hawking round clearings where the swamps of the Apa Tani Valley run up into the forest at 5,000 ft., and I suspect that they were breeding there.

141. *Ictinaëtus malayensis*. Black Eagle.

The only large raptor at all common in the hills. I once saw a flock of over twenty circling together over the Pein Valley. Usually they are solitary. One was shot at Kore while raiding a chicken-run.

142. *Spilornis cheela*. Crested Serpent Eagle.

Not uncommon in river valleys and ravines at fairly low elevations.

143. *Baza jerdoni*. Blyth's Baza.

A pair were seen soaring and mewing over the 'terai' jungle at Dejoo on the edge of the plains.

144. *Dendrophassa pompadora phayrei*. Pompadour Green Pigeon.

A specimen was obtained, but the locality not recorded.

145. *Sphenocercus apicaudus*. Pintailed Green Pigeon.

A specimen was obtained at Selsemchi, 1,500 ft.

146. *Sphenocercus sphenurus*. Wedgetailed Green Pigeon.

Numerous round Kore, 5,000 ft., in April when a certain berry was in season. Two were collected.

147. *Ducula badia*. Hodgson's Imperial Pigeon.

Large numbers were seen on the outer ranges between Selsemchi, 1,800 ft., and Lichi, 4,000 ft., where they were feeding on fruiting trees in heavy forest.

148. *Columba pulchricollis*. Ashy Woodpigeon.

Dafla name: *Pukurr*.

Occurs in the high-level evergreen forest between the Pein Valley and the Apa Tani Plateau. I shot one out of a small flock in pine trees at Soro, 6,000 ft. It is a silent and sluggish bird.

149. *Chalcophaps indica*. Emerald Dove.

Widely spread all over the hills, but nowhere common.

150. *Streptopelia orientalis orientalis*. Rufous Turtle Dove.

Generally not common. Seen occasionally in pairs in paddy fields and woodland patches on the Pein Valley down. Much more numerous in the Apa Tani Valley where they feed in the cultivation and breed in the pine plantations. Their numbers are greatly augmented after the harvest when there is a big influx to glean the stubbles.

151. *Streptopelia chinensis suratensis*. Indian Spotted Dove.

Found in the gardens round Dafla villages, but not common.

152. *Macropygia unchall*. Bartailed Cuckoo Dove.

Seen at Kore, 5,000 ft. They were resident but not numerous and were unobtrusive, haunting nullahs choked with secondary jungle, and feeding much on the ground. The specimen I shot had its crop stuffed with small black berries. They ascend the highest hills at certain times of year and I encountered flocks on top of Donko Puttu, 7,000 ft.

153. *Polyplectron bicalcaratum*. Peacock Pheasant.

Only encountered on the outer range from plains level up to the summit of Tasser Puttu, 4,000 ft., in heavy evergreen forest.





THE APA TANI VALLEY. Young plantation of *Pinus excelsa* in foreground



Blacknecked Cranes on Apa Tani paddy stubbles.

(Photos: F. N. Betts)

